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EXAMINER

HONEYCUTT, KRISTINA B

ART UNIT

PAPER NUMBER

2178

DATE MAILED: 09/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/960,769

Applicant(s)

SORIA ET AL.

Examiner

Kristina B. Honeycutt

Art Unit

2178

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 July 2005.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-43 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-43 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 07 March 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This action is responsive to the Request for Continued Examination filed July 27, 2005.

This action is made Final.

2. Claims 1-43 are pending in the case. Claims 1, 17 and 31 are independent claims.

Drawings

3. The drawings filed on March 7, 2005 are accepted.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Art Unit: 2178

4. Claims 1, 2, 8-10, 12-15, 17, 18, 24, 25, 27-29, 31, 32, 38, 39, 41 and 42 are rejected under 35 U.S.C. 102(b) as being anticipated by Sinander (WO 99/08206; International Publication Date February 18, 1999).

Regarding independent claim 1, Sinander discloses a method for supporting versioning of data, said method comprising the steps of:

- associating version numbers, each having a different value, with a data item (p.7, Table 1 – as demonstrated in the table, different version numbers are associated with data);
- storing a most recent version of said data item in a first table (p.2, lines 36-37; p.3, lines 16-25; p.4, lines 2-4; p.5, lines 9-14; Figures 2b, 3, 4 – as demonstrated in the figures and cited text, a most recent version is stored in a table since Sinander discloses adding a new version to a database);
- storing a version of said data item other than said most recent version in a second table (p.2, lines 33-35; p.3, lines 16-25; p.8, lines 4-9; Figures 2b, 3, 4 – as demonstrated in the figures and cited text, other versions of data are stored in a second table since Sinander discloses storing a new version as well as an old version in tables); and
- determining the version of a stored data item based on said version number and a storage location of said stored data item (p.7, lines 25-35; p.8, lines 4-9, 15-25; Figures 2b, 3, 4 – as demonstrated in the figures and cited text, the version is determined based on version number and location in the table).

Regarding dependent claim 2, Sinander discloses the method of claim 1, further comprising:

- the step of associating said version number with a version of said stored data item (p.7, Table 1, lines 25-35 – as demonstrated in the table and cited text, version numbers are associated with stored data).

Regarding dependent claim 8, Sinander discloses the method of claim 1, wherein:

- said version number having a value of zero (0) is associated with said most recent version of said stored data item or an oldest version of said stored data item, depending on a context of use for said version number (p.7, Table 1, lines 23-35; p.8, lines 4-9 – as demonstrated in the table and cited text, a value of zero is associated with the oldest version of data).

Regarding dependent claim 9, Sinander discloses the method of claim 1, further comprising:

- the step of performing an operation on said first and said second table (p.8, lines 4-9 – as demonstrated in the cited text, an operation is performed on the tables since the tables are synchronized).

Regarding dependent claim 10, Sinander discloses the method of claim 9, wherein:

Art Unit: 2178

- said operation including said version number having a value of zero (0) is interpreted as a request for said most recent version of said stored data item, and said operation is selected from a group consisting of a query operation, a retrieve operation, and an update operation (p.2, lines 33-37; p.7, lines 25-28; p.8, lines 4-9 – as demonstrated in the cited text, operation is an “update” operation and most recent version is requested).

Regarding dependent claim 12, Sinander discloses the method of claim 1, further comprising:

- a step of performing a query for said stored version for said data item (p.7, lines 25-35 – as demonstrated in the cited text, a query is performed on data).

Regarding dependent claim 13, Sinander discloses the method of claim 1, wherein:

- a first instance of a version of said data item is stored in said first table (p.4, lines 2-4; p.7, lines 23-35; figures 2b, 3, 4 – as demonstrated in the figures and cited text, a version of the data is stored in a first table).

Regarding dependent claim 14, Sinander discloses the method of claim 1, further comprising:

- the step of performing a query on said first table and said second table wherein a column attribute of a column selected by said query is retained in a result of said

query (p.7, Table 1; p.8, lines 4-9 – as demonstrated in the table and cited text, a column attribute is retained as a result of a query).

Regarding dependent claim 15, Sinander discloses the method of claim 14, wherein:

- said query invokes a union operation (p.3, lines 1-7, 16-25 – as demonstrated in the cited text, a union operation is invoked).

Regarding independent claim 17, Sinander discloses a system for supporting versioning of data, said system comprising:

- a memory (Figure 1; p.4, lines 26-27 – as demonstrated in the figure and cited text, a memory is disclosed);
- means for associating version numbers, each having a different value, with a data item (p.7, Table 1 – as demonstrated in the table, different version numbers are associated with data);
- means for storing a most recent version of said data item in said memory and a second table for storing a version of said data item other than said most recent version in said memory (p.2, lines 33-37; p.3, lines 16-25; p.4, lines 2-4; p.5, lines 9-14; p.8, lines 4-9; Figures 2b, 3, 4 – as demonstrated in the figures and cited text, a most recent version is stored in a table and other versions of data are stored in a second table since Sinander discloses adding a new version to a database and storing a new version as well as an old version in tables); and

Art Unit: 2178

- means for determining the version of a stored data item based on said version number and a storage location of said stored data item (p.7, lines 25-35; p.8, lines 4-9, 15-25; Figures 2b, 3, 4 – as demonstrated in the figures and cited text, the version is determined based on version number and location).

Regarding dependent claims 18, 24, 25 and 27-29, the claims reflect the system with means for performing the operations of claims 2, 8, 10 and 13-15 respectively and are rejected along the same rationale.

Regarding claims 31, 32, 38, 39, 41 and 42, the claims reflect the storage medium having computer readable instructions for performing the operations of claims 1, 2, 8, 10, 14 and 15 respectively and are rejected along the same rationale.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2178

5. Claims 3-6, 19-22 and 33-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sinander (WO 99/08206) in view of Frey et al. (U.S. Patent 5410695).

Regarding dependent claim 3, Sinander does not disclose stored data item is associated with a (version number - 1) value. Frey teaches an associated value (col. 19, lines 23-26). It would have been obvious to one of ordinary skill in the art, having the teachings of Sinander and Frey before him at the time the invention was made, to modify the method taught by Sinander to include associated values as taught by Frey, because associating a value with stored data would increase the probability of the correct version being retrieved since the value could be checked during a query along with the version number.

Regarding dependent claim 4, Sinander does not disclose the version of said stored data item is determined based on said (version number - 1) value. Frey teaches a value and version number being associated (col. 19, lines 23-26). It would have been obvious to one of ordinary skill in the art, having the teachings of Sinander and Frey before him at the time the invention was made, to modify the method taught by Sinander to include associated values and version numbers as taught by Frey, because associating a value with stored data would increase the probability of the correct version being retrieved since the value could be checked during a query along with the version number.

Art Unit: 2178

Regarding dependent claim 5, Sinander does not disclose the step of generating a value for said (version number -1) value by incrementing said (version number - 1) value from zero (0) to n. Frey teaches incrementing a value (col. 19, lines 23-26). It would have been obvious to one of ordinary skill in the art, having the teachings of Sinander and Frey before him at the time the invention was made, to modify the method taught by Sinander to include incrementing a value as taught by Frey, because associating a value with stored data would increase the probability of the correct version being retrieved since the value could be checked during a query along with the version number.

Regarding dependent claim 6, Sinander does not disclose the step of generating a value for said version number by incrementing said version number from zero (0) to m. Frey teaches incrementing a version number (col. 19, lines 23-26). It would have been obvious to one of ordinary skill in the art, having the teachings of Sinander and Frey before him at the time the invention was made, to modify the method taught by Sinander to include incrementing a version number as taught by Frey, because associating a value with stored data would increase the probability of the correct version being retrieved since the value could be checked during a query along with the version number.

Art Unit: 2178

Regarding dependent claims 19-22 and 33-36, the claims reflect the system and storage medium for performing the method of claims 3-6 and are rejected along the same rationale.

7. Claims 7, 23 and 37 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Sinander (WO 99/08206) in view of Frey et al. (U.S. Patent 5410695) in further view of Akkary et al. (U.S. Patent 6591342).

Regarding dependent claim 7, Sinander does not disclose m has a predetermined maximum value. Akkary teaches a predetermined maximum value (col. 12, lines 55-65). It would have been obvious to one of ordinary skill in the art, having the teachings of Sinander and Akkary before him at the time the invention was made, to modify the method taught by Sinander to include a predetermined maximum value as taught by Akkary, because incrementing to a predetermined maximum value would ensure that storage does not fill if the maximum value were associated with the storage capacity so that new versions could be saved. It would have been advantageous to one of ordinary skill to utilize such combination because using a predetermined maximum number would allow older versions that were obsolete to be removed from storage so that new versions could be saved in the freed space.

Regarding dependent claims 23 and 37, the claims reflect the system and storage medium for performing the method of claim 7 and are rejected along the same rationale.

8. Claims 11, 26 and 40 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Sinander (WO 99/08206) in view of Duvillier et al. (U.S. Pub. No. 20020103815).

Regarding dependent claim 11, Sinander discloses said operation including said version number having a value of zero (0) is interpreted as a request for an oldest version of said stored data item (p.7, lines 25-35).

Sinander does not disclose a delete operation. Duvillier teaches a delete operation (p.6, para. 79). It would have been obvious to one of ordinary skill in the art, having the teachings of Sinander and Duvillier before him at the time the invention was made, to modify the method taught by Sinander to include a delete operation as taught by Duvillier, because deleting older versions of data would ensure that storage does not fill to capacity so new versions could be saved. It would have been advantageous to one of ordinary skill to utilize such combination because allowing older, obsolete versions to be removed from storage would free space for new versions to be saved.

Regarding dependent claims 26 and 40, the claims reflect the system and storage medium for performing the method of claim 11 and are rejected along the same rationale.

Art Unit: 2178

9. Claims 16, 30 and 43 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Sinander (WO 99/08206) in view of Schwartz et al. (U.S. Pub. No. 20020073089).

Regarding dependent claim 16, Sinander does not disclose column attribute is obtained from a sequential query language description area of said query result. Schwartz teaches SQL obtains column attributes (p.6, para. 71). It would have been obvious to one of ordinary skill in the art, having the teachings of Sinander and Schwartz before him at the time the invention was made, to modify the method taught by Sinander to include SQL obtaining column attributes as taught by Schwartz, because SQL was well-known at the time of the invention for querying and using a well-known language would have allowed more users to utilize the invention since there was a familiarity with SQL.

Regarding dependent claims 30 and 43, the claims reflect the system and storage medium for performing the method of claim 16 and are rejected along the same rationale.

Response to Arguments

10. Applicant's arguments filed June 27, 2005 have been fully considered but they are not persuasive. Regarding claim 1, Applicants indicate Sinander does not disclose

using versions of a data item, or data that is stored in a database and accessed by users of the database (p.9, para. 5). The Examiner disagrees because Sinander discloses versions of data stored in a database (p.2, lines 36-37; p.5, lines 9-14; p.7, Table 1). Sinander further discloses a user accessing the data stored in the database from a workstation (p.7, lines 25-35).

Applicants further indicate that Sinander refers only to versioning of components providing database functionality (p.10, para. 2) rather than data items. The Examiner disagrees because Sinander discloses versioning data in a database table (p.2, lines 34-35).

Claims 2-16 depend from independent claim 1 and are therefore rejected at least based on the rationale of the rejection above.

Independent claims 17 and 31 include recitals similar to independent claim 1 and are therefore rejected at least based on the rationale of the rejection above.

Claims 18-30 and 32-43 depend from independent claims 17 and 31 and are therefore rejected at least based on the rationale of the rejection above.

Regarding dependent claims 3-7, 11, 16, 19-23, 26, 30, 33-37, 40, 43, Applicants argue Frey (p.12, para. 5), Akkary (p.14, para. 2), Duvillier (p.15, para. 5), Schwartz (p.17, para. 2) do not disclose a method of supporting versioning of data including "associating version numbers, each having a different value, with a data item; storing a most recent version of said data item in a first table; storing a version of said data item other than said most recent version in a second table; and determining the version of a stored data item based on said version number and a storage location of said stored

Art Unit: 2178

data item," as recited in claim 1 (p.12, para. 5). The Examiner disagrees because Sinander discloses the limitations of independent claims 1, 17 and 31, as rejected above.

Conclusion

11. All claims are drawn to the same invention claimed in the application prior to the entry of the submission under 37 CFR 1.114 and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the application prior to entry under 37 CFR 1.114. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action after the filing of a request for continued examination and the submission under 37 CFR 1.114. See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Intelligent page store for concurrent and consistent access to a database by a transaction processor and a query processor (U.S. Patent 5317731),
- Building indexes on columns containing large objects (U.S. Patent 6243718),
- Systems and methods for backing up data files (U.S. Patent 6779003),
- Method and apparatus for simplified research of multiple dynamic databases (U.S. Pub. No. 20020091907),
- System for software update in manner based on processing properties of devices via maintenance network while allowing data transmission between devices on another network (U.S. Patent 5859977).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kristina B. Honeycutt whose telephone number is 571-272-4123. The examiner can normally be reached on 8-5:00 Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Hong can be reached on 571-272-4124. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For

Art Unit: 2178

more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

VMA

KBH

William L. Bashore
WILLIAM BASHORE
PRIMARY EXAMINER

9/12/2005